The Maryland Fruit Grower

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*CLASSIFICATION AND EVALUATION OF VARIETIES OF PEACHES GROWN IN THE NORTHEASTERN STATES**

A series of three conferences was held by the horticulturists of the twelve northeastern states during 1936 and 1937 for the purpose of establishing commercial value ratings for the varieties of peaches offered for sale in the region. The organization conference was held at Geneva, N. Y., in September 1936 at the call of Dr. U. P. Hedrick, representing the Station Directors. The states comprising the district are Maine, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Delaware, Maryland and West Virginia. Peach production is not a commercial industry in Vermont and comparatively few peaches are grown in Maine which necessarily limited reports from these states.

The evaluation of varieties is by individual states. It is quite apparent, however, that if a variety is satisfactory commercially in a majority of the states, it possesses greater adaptability and a wider commercial range than another variety that is of commercial value in only one or two states.

Basis of Evaluation and Classification

A series of seven classes was established for the evaluation of varieties as follows:

Class 1. Varieties recommended for general planting in commercial orchards in any given state.

This class comprises only varieties which can be recommended for the majority of commercial orchards in any state. The list is therefore a rather limited one.

Class 2. Varieties recommended for commercial planting only in special localities, for special conditions, or by certain growers in any state.

Growers should learn the nature of the limitations of any varieties in this list and under what conditions they may have commercial merit before they make commercial plantings.

Class 3. Varieties other than those in Class 1 or 2 which may be desirable for home orchards.

A person may plant in his home garden any variety he may desire. However, it is often difficult or impossible to obtain trees true-to-name of an uncommon or little grown variety.

Class 4. Varieties which can still be purchased but are of little or no commercial value and are not recommended for planting. This does not

* Prepared by a Committee of Horticulturists, representing eleven of the Northeastern States. Committee personnel is given on Page 6

Additional notes and information were added by Department of Horticulture, University of Maryland, as Editor's Notes.

necessarily mean that the variety is devoid of desirable characters but either that it is no longer profitable or that one or more varieties of the same season are superior.

Class 5. New varieties which appear of promising commercial value.

Class 6. New varieties of doubtful commercial value.

Class 7. New varieties of no apparent commercial value.

Where a variety has received an approved rating for commercial purposes it means for its particular season of ripening. A very early maturing variety and a midseason variety may be given a Class I rating but this does not necessarily mean that the earlier variety is equal to the later one in either edible quality or in general commercial qualities.

Evaluated List to Aid Grower in His Selection

Attention is called to the fact that the list of varieties given as Class 1, 2 or 5 in any state does not constitute a recommended list for any grower in that state to plant. It is merely an evaluated list to assist growers and nurserymen in making final selections. *Growers should seek special information from their own state authorities before making a final decision in regard to planting lists.*

Regional Climatic Variations

There is a marked difference in climate experienced by the peach regions of the northern group of states as compared to those of southern New Jersey, Delaware and southward. For this reason, the results of the survey will be presented first from the viewpoint of all of the northeastern states as a unit and secondly, from the standpoint of a north and a south section.

Evaluation of Varieties in the District as a Whole

A total of 86 varieties was evaluated and classified. Varieties which have been generally grown for several years are listed in Table 1, while those of comparatively recent introduction are listed in Table 2. Only 7 varieties out of a total of 86 were given a rating by as many as 10 of the 11 northeastern states reporting. These are Belle, Carman, Elberta, Golden Jubilee, Marigold, Rochester and South Haven.

Outstanding Varieties. Elberta proved to be the outstanding commercial variety with a Class 1 rating by 10 states. Golden Jubilee is second with a Class 1 rating by 7 states. J. H. Hale is third with a Class 1 rating in 4 states. It was, however, recommended for discard in 1 state.

Varieties Recommended for Discard. Each variety in the following list was recommended for discard by from 6 to 9 states.

Augbert (Roberta)
Arp
Chili
Early Crawford
Engles Mammoth
Fox
Frances
Heath
*Hiley
Krummel
Late Crawford
Mamie Ross
Morris White
Niagara
Oldmixon
Ray
*Salwey
Slappey
St. John

* Editor's Note: Hiley and Salwey may be recommended for limited planting in certain sections of Maryland.

Newer Varieties of Peaches. Of the newer varieties of peaches which were evaluated by one or more states and grouped in Table 2, Halehaven received a Class 5 rating by 7 states; Valiant by 5 states and Vedette by 4 states. The great majority of varieties listed in Table 2 have not apparently been extensively tested in the Northeast. Some of those which have only been tested in one or two states obviously lack merit. In some cases, a variety listed in Table 2 is given a No. 2 rating by a state. This means that although it is a comparatively new variety it is regarded as meeting the No. 2 classification. It is quite obvious that the merits of a variety may be determined earlier in some states than in others. One outstanding feature of the results in Tables 1 and 2 is that comparatively few of the varieties of peaches that are introduced to culture ever prove to be of general commercial merit. It emphasizes the fact that growers should make certain of the detailed characteristics and merits of a variety before they plant it commercially.

Pomologists are often requested by growers to give an opinion of the commercial merits of a variety that has been introduced for sale but which has not been fruited commercially in the state in which the grower expects to make a planting. It is impossible to judge the merits of a new variety for general commercial planting on the basis of the behavior of a few trees in one place. Only by actual fruiting tests under a range of soil and climatic conditions can one determine the true merits of a variety. Such a test requires a period of not less than four or five years after a variety of peach is introduced and planted and quite often that length of time is too short.

Evaluation of Standard Varieties in Northern Section

The evaluation of varieties has also been summarized with the New England States and New York considered as one section. The recommendations are not markedly different from those for the entire Northeast. Elberta and Golden Jubilee are the two outstanding Class 1 varieties. Marigold, Mikado, Oriole and J. H. Hale are the leading Class 2 varieties.

Evaluation of Standard Varieties in Southern Section

The southern section is made up of the states of New Jersey, Pennsylvania, Delaware, Maryland and West Virginia. Again Elberta and Golden

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Jubilee were the two leading varieties with J. H. Hale a close second. The varieties Cumberland, Belle and Marigold follow in rank when Class 2 ratings are also considered.

Season of Ripening

The length of the fruit development period of a variety from full bloom to maturity varies with the season according to the temperature and to a less extent other environmental factors. Since varieties do not respond equally to difference in temperature during the growing season, they do not ripen consistently with each other from year to year. Actual examples are given in New Jersey Station Bul. 511. It is therefore obvious that the number of days difference in ripening between varieties is also likely to vary somewhat between regions or districts.

At the request of the committee, the chairman made six groupings of varieties as they usually ripen at New Brunswick, N. J., in order to assist persons in comparing them as to season of ripening and in making selections of the most suitable for planting. Each person who intends to plant, however, should consult a specialist in his own state as to the season of ripening of varieties in that district.

Classification of Peach Varieties According to Approximate Season of Ripening at New Brunswick, N. J.

A—Ripening before Greensboro
Buttercup (Y)
Early Wheeler (Red Bird) (W)
Mayflower (W)
Mikado (Y)

B—Ripening from Greensboro to Golden Jubilee
Arp (Y)
Duke of York (W)
Greensboro (W)
Marigold (Y)
Raritan Rose (W)
Rosebud (W)
Sunbeam (Y)

C—Ripening during Golden Jubilee-Carman Seasons
Anna (W)
Carman (W)
Cumberland (W)
Delicious (W)
Golden Globe (Y)
Golden Jubilee (Y)
July Gold (Y)
Massasoit (Y)
N. J. 66 (W)
Oriole (Y)
Pioneer (W)
Radiance (W)

D—Ripening from Carman to Hiley
Burbank's Giant Free (Y)
Eclipse (Y)
Golden East (Y)
Halehaven (Y)
Hiley (W)
Ideal (Y)
July Elberta (Y)
Kathryn (W)
Mamie Ross (W)
Rochester (Y)
St. John (Y)
Slappey (Y)
South Haven (Y)
Valiant (Y)
Vedette (Y)
Veteran (Y)

E—Ripening from Hiley to Elberta
Belle (W)
Champion (W)
Early Crawford (Y)
Early Elberta (Y)
Illinois (W)
Japan Golden Giant Cling (Y)
Mountain Rose (W)
Peach Arine (Y)
Polly (Champion) (W)
Primrose (Y)

F—Ripening with Elberta to Late Crawford

Bowers September (Y)
Brackett (Y)
Candoka (Y)
Chili (Y)
Elberta (Y)
Engles Mammoth (Y)
Exquisite (Y)
Fertile Hale (Y)
Frances (Y)
Frank (Y)
Hal-berta (Y)
Hope Farm (W)
J. H. Hale (Y)
Kette (Y)
Oldmixon (W)
Ray (W)
Starks Late Elberta (Y)
White Hale (W)
Wilma (Early) (Y)

G—Ripening with or after Late Crawford

Augbert (Y)
Columbia (Y)
Dulce (W)
Fox Seedling (W)
Fredericka (Y)
Heath Cling (W)
Iron Mountain (W)
Katie (Y)
Krummel (Y)
Late Crawford (Y)
Lizzie (Y)
Morris White (W)
Pullars Cling (Y)
Rey Alberto (Y)
Salberta (Y)
Salwey (Y)
Wilma (Late) (Y)

Renamed Varieties, Duplicates, Mixtures and Substitutions

Renaming of varieties is a practice which is as old as fruit growing. One of the old European varieties of peaches is said to have acquired as many as 16 different names in Europe during the 17th and 18th centuries. There is an increasing need for a much greater number of persons in the fruit and nursery business who are competent varietal specialists in order to detect misnamed varieties. Varieties with globose glands can readily be separated in the nursery from those with reniform glands. The leaves of white-fleshed varieties are readily distinguished from those of yellow-fleshed sorts. Varieties with large showy flowers like Carman are easily distinguished from those with medium flowers like Elberta or small flowers like Iron Mountain. It would be helpful to growers if catalog descriptions included the flower and gland type for each variety.

Some Examples of Mixtures

When the Wilma peach was introduced two distinct varieties were distributed by the trade; one type developed large flowers and ripened a few days after Elberta while the other produced medium flowers and ripened about 10 days after Elberta. For the purpose of this survey they have been listed as Wilma Early and Wilma Late. Fortunately, other varieties have more merit than either and it is unnecessary to try to straighten out the mixture. The Early Elberta peach is sometimes sold as Goldfinch. The Slappey peach is sometimes sold as Early Elberta. J. H. Hale has been so often mixed with Elberta and other varieties that growers in some districts have lost confidence in the sources of supply. Several different varieties are being sold as Shipper's Late Red, one is a poor type of Elberta and another is so similar to J. H. Hale as to be indistinguishable, which amounts to the same thing commercially. At least, two distinct varieties have been offered as Late Elberta over a period of several years and by the same source in at least one instance. Late Crawford is badly mixed but it is recommended for discard in the Northeast so the problem can be dismissed. The two peaches South Haven and Sun-Glo are apparently identical or at least are so nearly

alike that only one should have been propagated. Halehaven is a superior variety, therefore this problem can also be dismissed.

Commercial Testing of New Varieties

Peach growers in the past have often tested a number of varieties ripening at about the same season. Modern competition and market requirements make it very costly and unwise for the private grower to do must testing of varieties. A new variety should have received several years of actual fruiting tests under commercial conditions and under a varied environment before a fruit grower seriously considers it for commercial planting.

Personnel of Committee on Peach Varieties

The following persons contributed the official evaluation lists for the several states:

Maine—J. H. Waring and A. K. Gardner.
New Hampshire—George F. Potter.
Massachusetts—J. K. Shaw and R. A. Van Meter.
Rhode Island—E. P. Christopher.
Connecticut—S. P. Hollister.
New York—Olav Einset.
Pennsylvania—F. N. Fagan.
New Jersey—M. A. Blake.
Delaware—F. S. Lagasse.
Maryland—A. L. Schrader.
West Virginia—R. S. Marsh and W. H. Childs.

TABLE I
Varieties Classed as Generally Grown

Varieties	Maine	N. H.	Mass.	Conn.	R. I.	N. Y.	N. J.	Penn.	Del.	Md.	W. Va.
Augbert (Roberta)	--	4	4	4	--	4	4	--	3	4	4
Arp	--	4	4	4	--	4	4	--	4	4	2
Belle	4	2	1	4	--	4	2	1	2	1	2
Brackett	--	--	--	4	--	4	2	2	2	1	4
Carman	2	1	4	4	--	4	4	2	4	4	2
Champion	--	3	3	4	--	3	4	4	4	4	2
Chili	--	--	4	4	--	4	4	4	4	4	3
Cumberland	--	--	6	2	1	2	2	2	1	5	5
Early Crawford	4	4	4	4	--	3	4	4	3	4	4
Early Elberta	2	5	2	4	--	2	2	2	2	2	6
Early Wheeler (Red Bird)	--	--	--	4	--	4	2	2	4	4	2
Eclipse	2	--	6	2	--	4	2	5	--	5	--
Elberta	4	1	1	1	1	1	1	1	1	1	1
Engles Mammoth	2	--	--	4	--	4	4	4	4	4	4
Fox Seedling	--	--	4	4	--	4	4	4	4	4	4
Frances	--	--	4	4	--	4	4	4	2	4	4
Golden Jubilee	5	1	1	1	1	2	1	2	1	1	5
Greensboro	2	4	4	4	--	4	4	2	4	4	2
Heath Cling	--	--	4	4	--	4	4	4	4	4	4
Hiley	4	4	4	4	--	4	4	4	4	2	4
Iron Mountain	--	--	4	4	--	4	2	4	2	4	4
J. H. Hale	--	2	1	2	--	2	1	1	1	2	4
Kathryn	2	--	--	--	--	4	2	--	--	--	--
Krummel	--	--	4	4	--	4	4	4	2	4	4

Late Crawford	4	..	4	4	..	4	4	4	3	4	3	
Late Elberta	..	..	..	..	..	4	4	..	..	4	..	
Mamie Ross	..	..	4	4	..	4	4	4	4	4	3	
Marigold	..	5	2	2	1	2	2	5	2	6	5	
Massasoit	..	..	4	..	..	4	4	..	..	6	..	
Mayflower	..	..	4	4	..	2	2	2	2	4	2	
Mikado	2	5	1	6	1	2	4	2	3	2	..	
Morris White	..	..	..	4	..	4	4	4	4	4	4	
Niagara	..	..	..	4	..	4	4	4	4	4	4	
Oldmixon	..	..	4	4	..	4	4	4	4	4	3	
Oriole	..	5	1	2	..	2	2	2	2	6	5	
Peregrine	..	..	..	..	..	3	4	..	..	..	..	
Pioneer	..	..	2	..	..	2	2	6	..	7	..	
Primrose	..	..	5	..	..	4	4	6	..	7	..	
Radiance	..	..	3	..	..	4	4	6	..	7	..	
Ray	..	..	4	4	..	4	4	4	4	4	3	
Rochester	2	4	4	4	..	4	4	2	4	4	2	
Rosebud	..	..	3	3	..	4	2	..	..	7	..	
Salberta	..	..	4	..	..	4	4	..	2	5	..	
Salwey	..	..	4	4	..	4	4	4	4	4	3	
Shipper's Late Red	..	..	4	..	..	4	4	..	..	2	4	
Slappey	2	..	4	4	..	4	4	4	4	4	3	
South Haven	6	4	4	4	..	2	4	2	2	4	5	
St. John	..	..	4	4	..	4	4	4	4	4	4	
Sunbeam	..	..	3	3	..	2	2	..	..	7	..	
Wilma (Early)*	..	..	..	..	..	4	4	..	6	4	..	
Wilma (Late)*	..	..	..	..	..	..	4	4	6	4	..	

*See page 5

TABLE II

Varieties Classed as New

Anna	..	..	..	..	..	..	6	..	..	..	..	
Bower's September	..	..	..	..	..	..	7	..	..	..	..	
Burbank's Giant Free	..	..	..	..	..	..	7	..	..	..	..	
Buttercup	..	..	3	4	..	..	3	..	2	7	6	
Candoka	..	..	..	7	5	7	7	6	..	6	..	
Columbia	..	..	..	..	..	4	4	..	..	..	..	
Delicious	..	..	5–3	..	..	2	2	5	..	7	..	
Duke of York	..	..	..	..	..	..	5	..	..	..	..	
Dulce	..	..	..	..	..	4	4	..	..	..	..	
Exquisite	..	..	..	..	..	..	4	..	..	..	..	
Fertile Hale	..	..	..	..	..	6	7	..	..	..	..	
Frank	..	..	..	..	..	4	4	..	..	..	..	
Fredericka	..	..	..	..	..	6	6	..	..	..	..	
Golden East	..	..	..	..	..	..	5	..	..	..	..	
Golden Globe	..	..	..	..	..	..	2	..	..	..	..	
Hal-berta	..	..	..	..	..	..	6	..	..	6	..	
Halehaven	..	5	5	5	..	5	5	5	..	5	..	
Hope Farm	..	..	4	4	..	6	4	..	2	..	4	
Ideal	..	..	5	5	..	6	7	..	..	..	..	
Japan Gold. Giant Cling	..	..	..	..	..	7	7	..	..	7	..	
July Elberta	..	..	..	..	..	..	7	..	..	..	..	
July Gold	..	..	..	..	..	..	7	..	..	..	..	
Katie	..	..	..	..	..	..	4	..	..	..	..	
Kette	..	..	..	..	..	4	4	..	..	..	..	
Lizzie	..	..	..	..	..	..	2	..	..	..	..	
N. J. 66	..	..	..	..	..	6	2	..	..	..	..	
Polly	..	..	..	..	..	..	7	..	..	..	..	
Peach Arine	..	..	..	..	..	6	7	..	..	..	..	
Pullar's Cling	..	..	..	..	..	..	4	..	..	..	..	
Raritan Rose	..	..	..	..	..	..	5	..	..	..	..	
Rey Alberto	..	..	..	..	..	..	4	..	..	..	..	
Valiant	..	5	5	..	..	5	5	..	..	5	..	
Vedette	..	..	5	..	..	5	6	5	..	5	..	
Veteran	..	..	5	..	..	6	..	5	..	5	..	
White Hale	..	..	..	5	..	5	5	..	..	..	..	

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